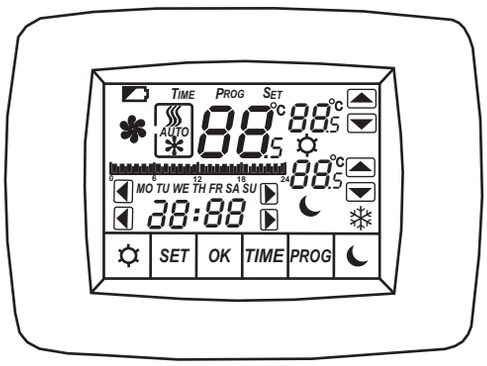
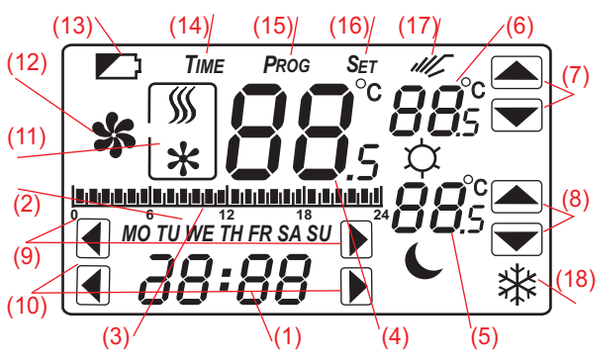
# TOUCH SCREEN ROOM THERMOSTAT TS930




## Features

BLUE-BACK-LIT Touch Screen
Comfort and Economy Mode Set-Points
Anti-Frost Feature
Vacation Setting
Simple To Program
Fits Conventional Wiring

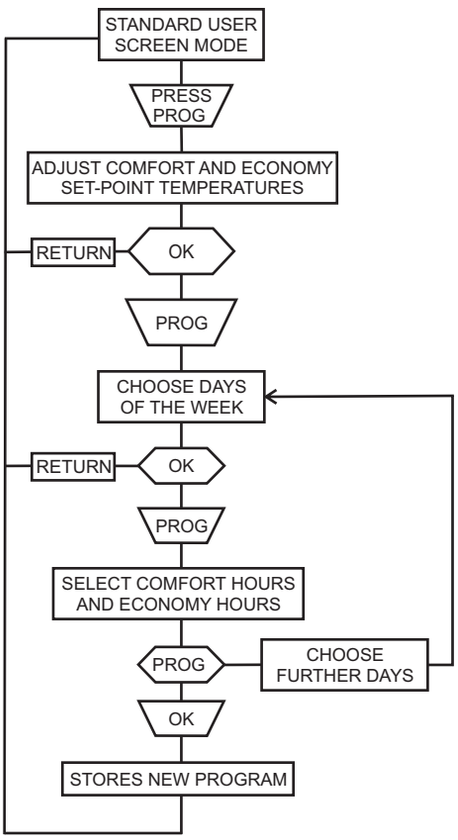
## Display Symbols



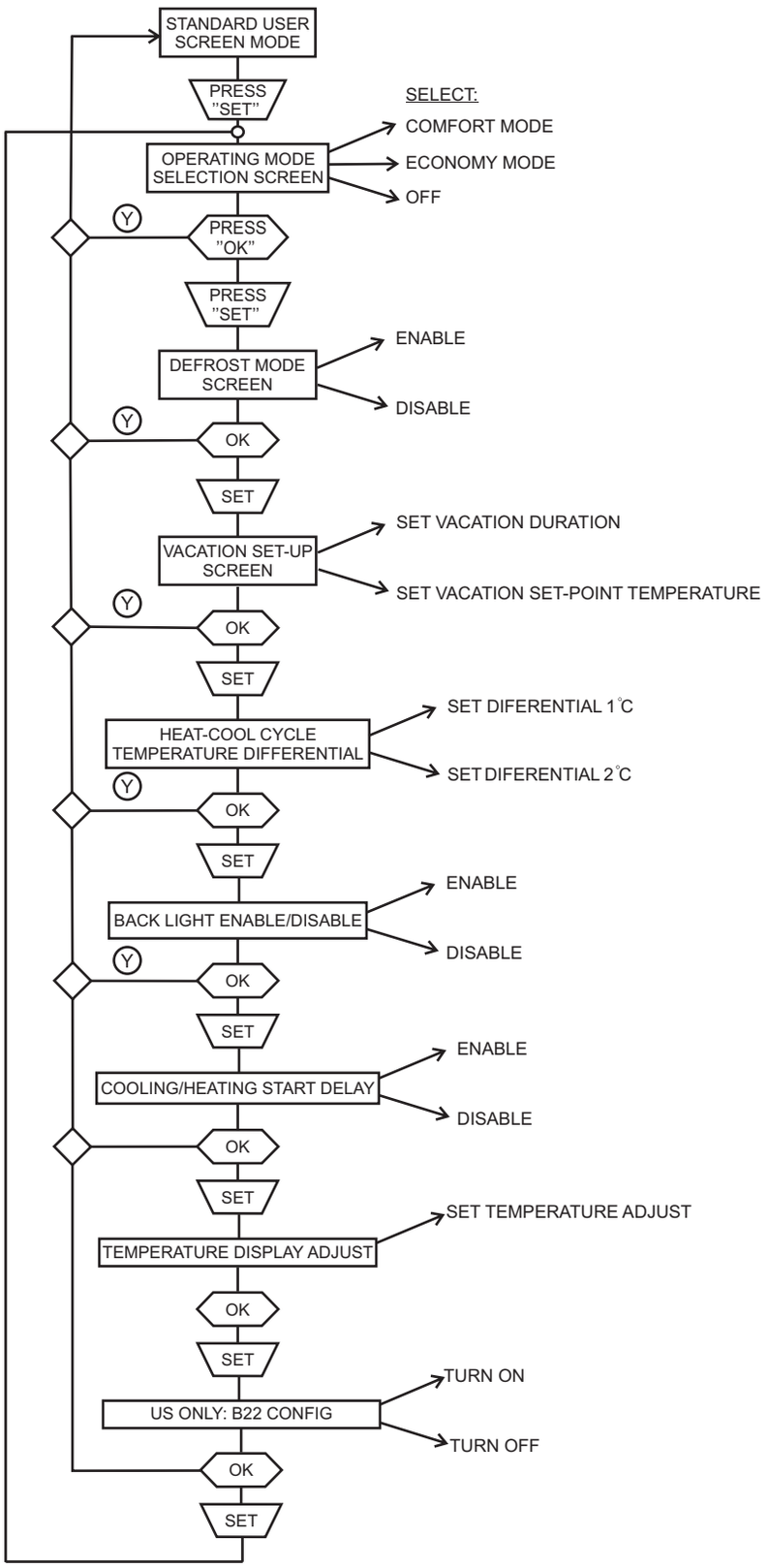

(1) 24 Hour Clock
(2) Week Days
(3) 24 Hour Bar-Graph, Empty Hours = Economy Mode, Filled Hours = Comfort Mode;
(4) Current Room Temperature
(5) Economy Temperature Set-Point
(6) Comfort Temperature Set-Point
(7) Comfort Set-Point Adjust Keys
(8) Economy Set-Point Adjust Keys
(9) Week Days Adjust Keys
(10) Clock Adjust Keys
(11) System Heat / Cool Symbols within Select Button Area
(12) Output Active Symbol
(13) Low Battery Indicator
(14) Time Setting Symbol
(15) Program Setting Symbol
(16) SET Mode Symbol
(17) Manual Override symbol
(18) Defrost symbol

# TOUCH SCREEN ROOM THERMOSTAT TS930

## Heating or cooling program




## Feature program sequence



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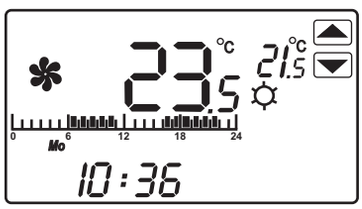
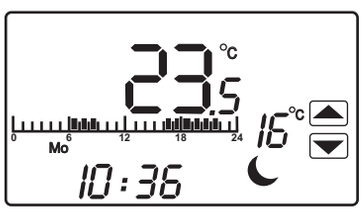
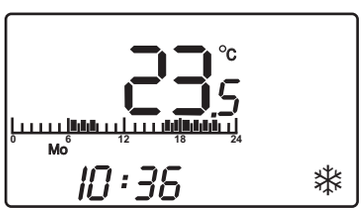
## Common Display Views



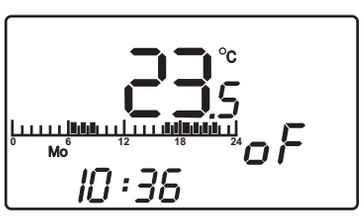

COMFORT MODE (Comfort TEMP determines state of the output):
Current room temperature is displayed in the middle, current time at the bottom of the screen. Top right corner presents COMFORT MODE Set-Point with its adjustment keys. The FAN symbol indicates an active output. Note that hour bar-graph is enabled between 6AM and 11AM. 24-hour bar-graph clear fields indicate ECONOMY MODE, filled entries indicate COMFORT MODE.




ECONOMY MODE (Economy TEMP determines state of the output):
Current room temperature is displayed in the middle, current time at the bottom of the screen. Bottom right corner presents ECONOMY MODE Set-Point with its adjustment keys. Note that hour bar-graph is clear between 9AM and 4PM. 24-hour bar-graph clear fields indicate ECONOMY MODE, filled entries indicate COMFORT MODE.

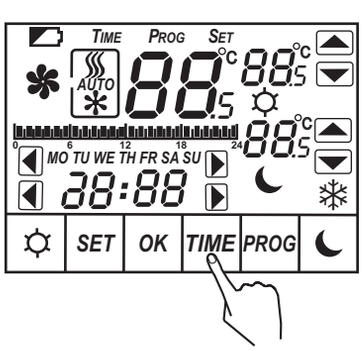



DEFROST FEATURE:
DEFROST active - See section “DEFROST FEATURE”.



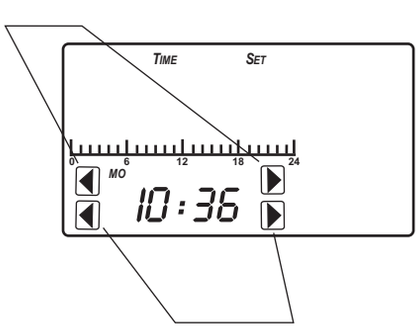

CURRENT MODE: OFF

## CLOCK CONFIGURATION




Press “TIME” button at the toolbar. The display changes as depicted bellow. Use upper adjustment keys for setting the day of the week and lower adjustment keys for setting current time. Press and hold for high speed scan to commence. Once the setting is complete, press “OK” to revert back to normal operating mode.

Day adjust keys




Time adjust keys



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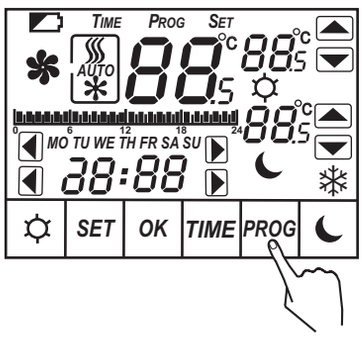
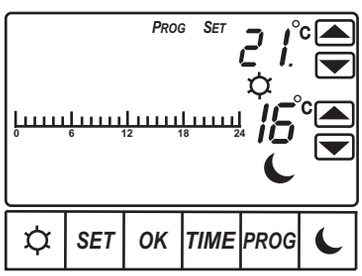
## 7 DAY PROGRAM EXAMPLE




This section deals with:
Adjusting comfort and economy temperature set-points for single or sequence of days in a week. Also, see Heating or Cooling Program Chart, Page 2.

Comfort temperature is household target temperature during the hours of occupancy, and is generally assumed to be the temperature for which the heating system is to be active. Economy temperature is assumed to be the temperature during hours when heating system is not required, usually during daytime on workdays.

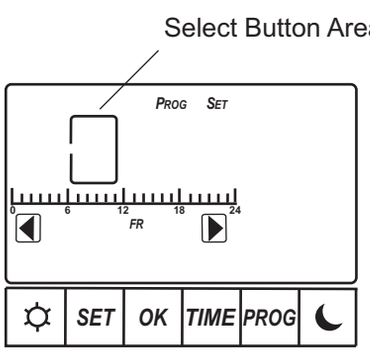
To start, press “PROG” key at the command bar.



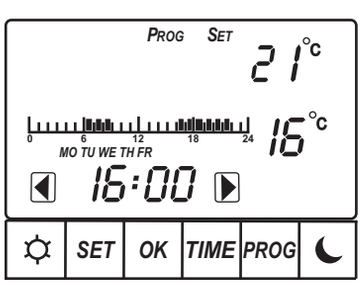

Top right corner shows COMFORT set-point temperature, SUN symbol as COMFORT MODE symbol, and its related adjustment keys.

Centre temperature presents ECONOMY MODE set-point with its MOON symbol and related adjustment keys.

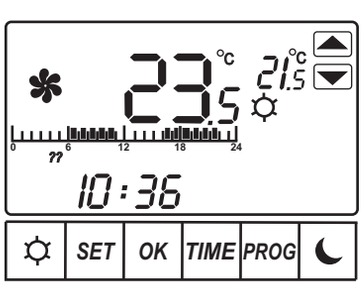
Directly press the adjustment keys to configure the required set-points for a specific day in the week. Once completed, press “PROG” button on the toolbar.




The screen now changes to allow selection of the day in the week. Symbol “FR” for Friday is blinking underneath the current day program bar. Use left and right adjustment keys to select day in the week and then press SELECT button above the current day program bar. Note that once SELECT button has been pressed, the day symbol stops blinking, and new day symbol appears. Now you can select further days to contain the same program, by again clicking adjust keys followed by SELECT button. Repeat this procedure to select all desired days. Note: at least one day in the week has to be selected to enable further steps of the programming sequence.




To continue to Schedule Programming, press “PROG” button at the command bar. For this specific setting COMFORT and ECONOMY hours have to be specified. The selection is displayed on current day program bar. COMFORT hour entries are indicated with black rectangle, while ECONOMY hour entries are empty hour slots. Use cursor to select specific hour, by pressing adjustment keys left and right from the current clock. Once at the required hour slot, press SUN to select COMFORT or MOON to select ECONOMY mode. Repeat the procedure for all hours of the day.




Once complete, press “OK” button at the command bar to revert back to the normal operating mode.



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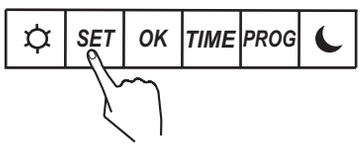
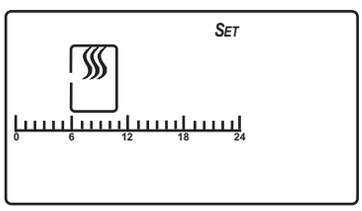
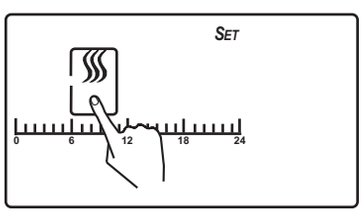
## Select HEAT, OFF or COOL, plus Defrost Feature

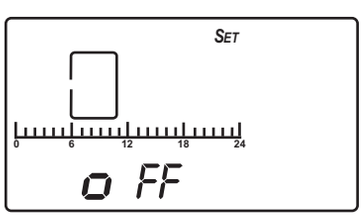


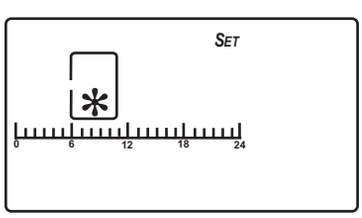

MODE Selection Screen with HEAT as current active mode



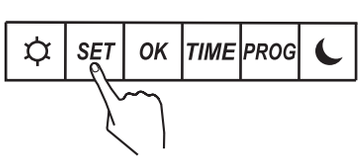

Press SELECT BUTTON to change current MODE




OFF Selected




COOL selected




Press SET to confirm and save.

This section deals with operating mode selection, and DEFROST feature: Choose between HEAT, OFF or COOL, plus enable or disable DEFROST feature.

DEFROST feature is intended to keep ambient temperature above 7°C at all times. Once enabled, and the system is in HEAT mode, Ts930 will engage the output if ambient temperature falls bellow 7°C.

To start, press “SET” button on the command bar, as depicted to the left.

Display will now change to mode selection screen, where SELECTION symbol is shown. At the same time, current operational mode symbol will also be shown. As default, this will be the HEAT mode symbol, as presented to the left.

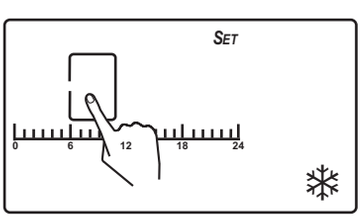
To shuffle between modes, press SELECT button until next mode symbol appears and the current one turns off. Repeat the procedure until required mode symbol is displayed.

To save the chosen operating mode press “SET”. User now have option to proceed with DEFROST feature enable/disable option by pressing “SELECT” or simply to return to normal operating mode by pressing “OK”.

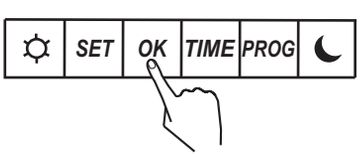
Defrost feature can be disabled or enabled, status of which is indicated by presence of a defrost symbol (snowflake) at the lower right corner of the screen.

After pressing “SET”, DEFROST symbol will appear flashing at the lower right corner of the screen. Flashing of the defrost symbol indicates defrost currently disabled. To enable, press SELECT button. Defrost symbol will now stop flashing, defrost thus being enabled. To alternate defrost mode, press SELECT as required.

Once complete, press “OK” at the command bar to exit configuration mode and return back to normal display.




Press SELECT BUTTON to enter defrost configuration




Press OK to exit configuration and revert back to normal operating mode.

DEFROST Symbol:
Flashing - Disabled
Solid - Enabled



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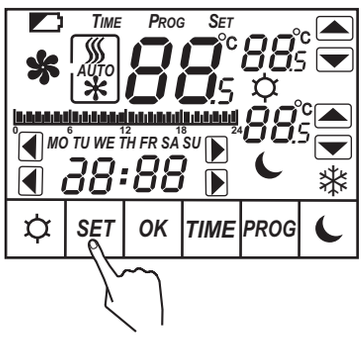
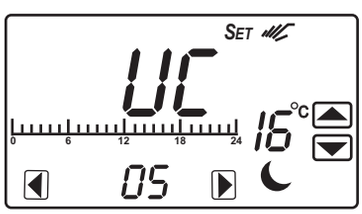
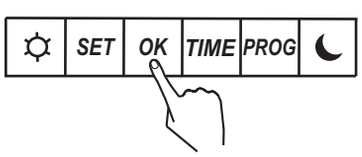
## VACATION SETTING



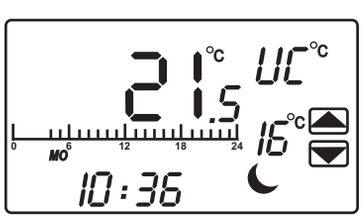

To enter Vacation Setting screen press “SET” three (3) times




Vacation Setting Screen




Press OK to confirm and return to the normal display mode

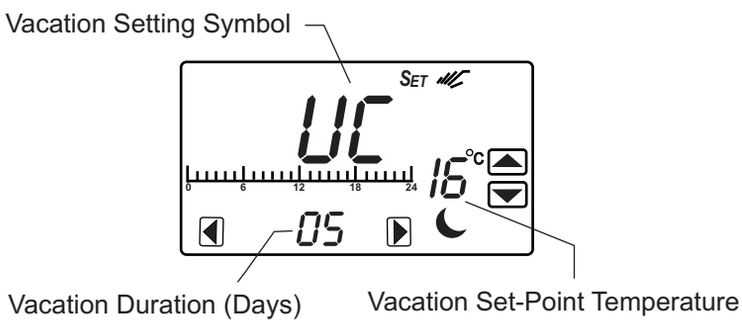



Screen will now show UC vacation symbol and vacation set-point temperature

Vacation Setting is provided to allow special temperature set point to be active during several consecutive days, without changing normal COMFORT and ECONOMY settings. This is useful when property is not to be occupied for several days, but the system is still required to maintain certain ambient temperature.

Vacation setting can be enabled for a maximum off 99 consecutive days.

To configure vacation setting, press “SET” at the command bar several times until symbol UC appears on the screen (see left).




Use left-right vacation duration adjust keys to set the required vacation period (maximum 99 days). Use up-down vacation set-point adjust keys to program the vacation set-point temperature. This set-point will become immediately active and will remain such for the duration of the vacation period.

Screen will now show UC vacation symbol and vacation set-point temperature bellow it. The current ambient temperature and clock are displayed as normal. This screen will remain for the duration of the vacation period.

To cancel vacation setting, enter the vacation setting screen and set the vacation duration to zero (0).



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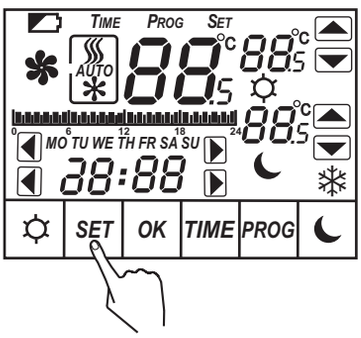
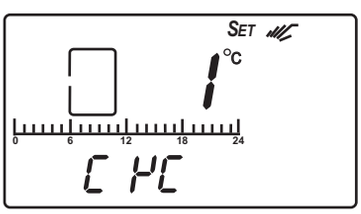
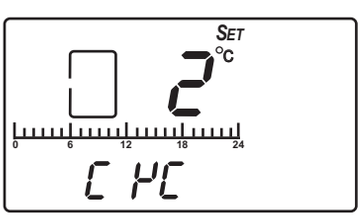
## COOLING or HEATING TEMP DIFFERENTIAL



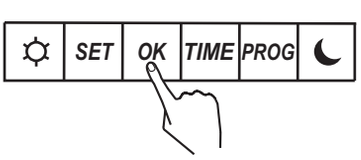

To enter TEMP DIFFERENTIAL setting screen press “SET” four (4) times




TEMP DIFF screen with 1°C setting




TEMP DIFF screen with 2°C setting




Press OK to confirm and return to the normal display mode

Cooling or Heating temperature differential - This setting can be adjusted to 1 or 2 °C. When enabled, it will exclude potential temperature oscillations near to set-point temperature.

To configure temperature differential, press SET button at the command bar four (4) times.

The status is displayed as ON or alternatively OFF. Use the SELECT button to alternate. Once configured, press OK to return to normal mode screen.



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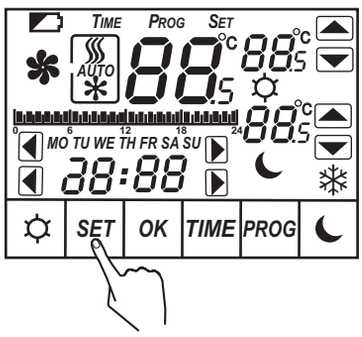
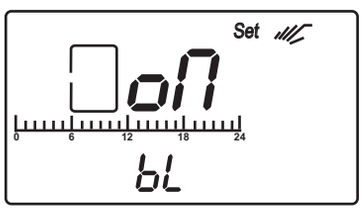
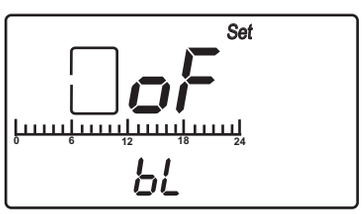
## BACKLIGHT Enable/Disable



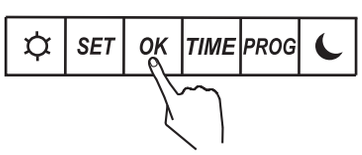

To enter DELAY setting screen press “SET” five (5) times




Back Light activated ON
Use SELECT to alternate



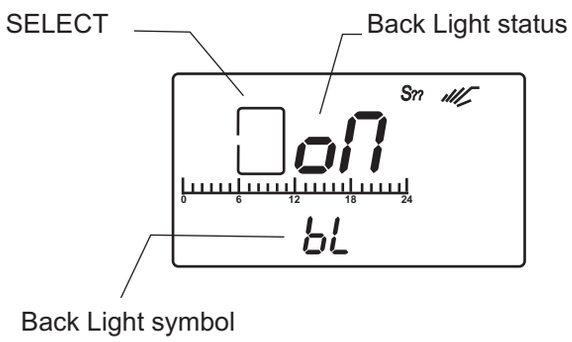

Back Light de-activated OFF
Use SELECT to alternate




Press OK to confirm and return to the normal display mode

Use to enable or disable Back Light.

The status is displayed as ON or alternatively OFF. Use the SELECT button to alternate. Once configured, press OK to return to normal mode screen.



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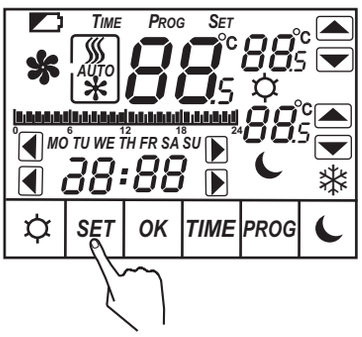
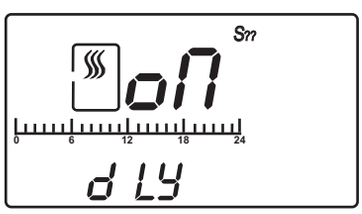
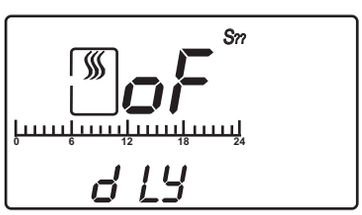
## COOLING or HEATING START DELAY



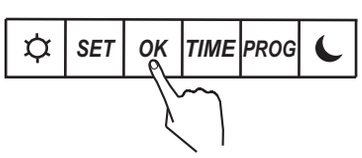

To enter DELAY setting screen press “SET” six (6) times




DELAY active ON
Use SELECT to alternate



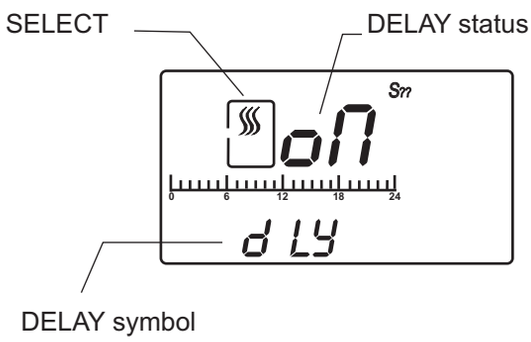

DELAY disabled OFF
Use SELECT to alternate




Press OK to confirm and return to the normal display mode

Cycle Start Delay - This feature ensures 5 minute delay between system cycles. For instance, during HEAT mode, if the ambient temperature falls bellow set-point minus the temperature differential, Ts930 will delay heating for 5 minutes. This feature is useful for areas with rapid, short duration oscillations in temperature. For instance, in case window or door is opened for short period of time in TS930’s vicinity.

The status is displayed as ON or alternatively OFF. Use the SELECT button to alternate. Once configured, press OK to return to normal mode screen.



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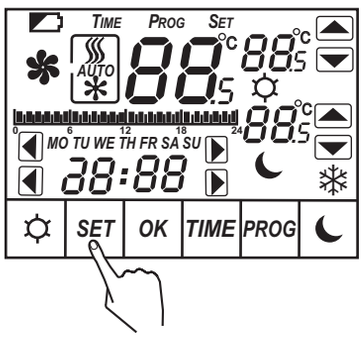
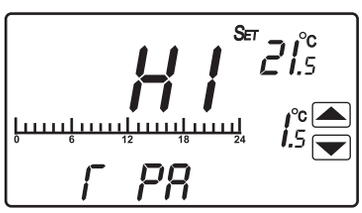
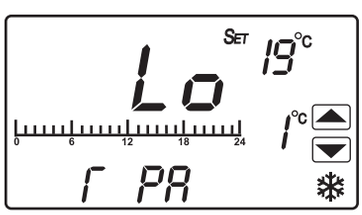
## Display TEMP Adjust




To enter DELAY setting screen press “SET” seven (7) times




TEMP DIFF screen with 1.5°C adjustment above the measured ambient

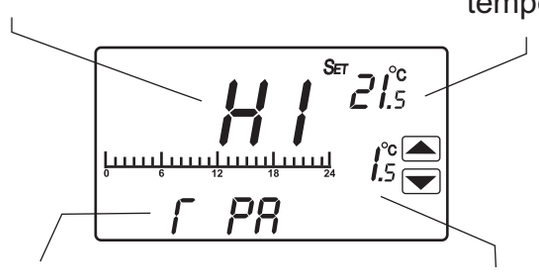



TEMP DIFF screen with 1.00°C adjustment bellow the measured ambient

Displayed temperature adjust.
This feature is available to allow +/- modification of the displayed temperature. Ts930 has been accurately calibrated before dispatch, but in case displayed temperature is needed to be corrected (for instance when match has to be made with an old or other local thermostats), this feature can be used. It will allow +/- 2.5°C variation around the current measured ambient temperature.

HI - indicates plus (+) variation
LOW - indicates minus (-) variation

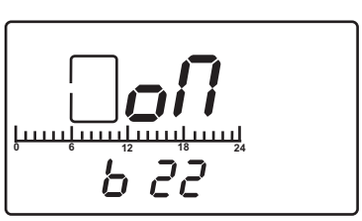
Current ambient temperature

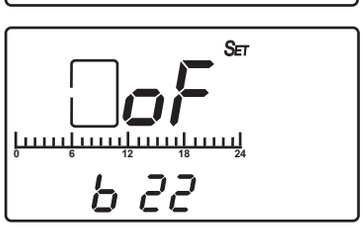



TEMP DIFF setting symbol

Variation

## US ONLY: B22 ENABLE




Enable/Disable B22 Offset:
Use this screen to enable or disable temperature offset for B22 boilers.
US and Canada models only.



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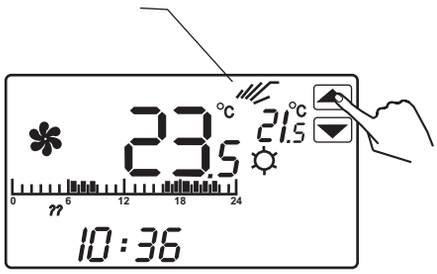
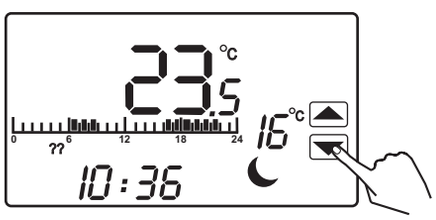
## MANUAL OVERRIDE

Manual Override Symbol

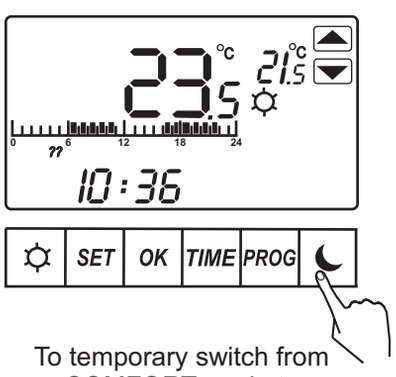



Manual Override
Quite often it is required to change temperature set-point in flight, without actually changing already active program. Ts930 allows seamless temporary set point adjustment. For either COMFORT or ECONOMY modes press adjust buttons to alter the current set point temperature.

Manual Override during COMFORT program: Simply use adjust buttons to increase or decrease current set-point. Ts930 will display manual override symbol. Manually adjusted set-point will remain active until end of COMFORT time frame.

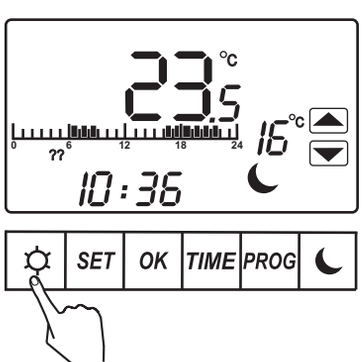



Manual Override during ECONOMY program: Simply use adjust buttons to increase or decrease current set-point. Ts930 will display manual override symbol. Manually adjusted set-point will remain active until end of ECONOMY time frame.




To temporary switch from COMFORT mode to ECONOMY mode press ECONOMY mode button.

Manual Override Reverse Status.
It is very simple to switch between COMFORT and ECONOMY modes, by selecting COMFORT or ECONOMY buttons from the command bar. The action is followed by manual override symbol being displayed, and this mode will remain active until the current hour ending.




To temporary switch from ECONOMY mode to COMFORT mode press COMFORT mode button.



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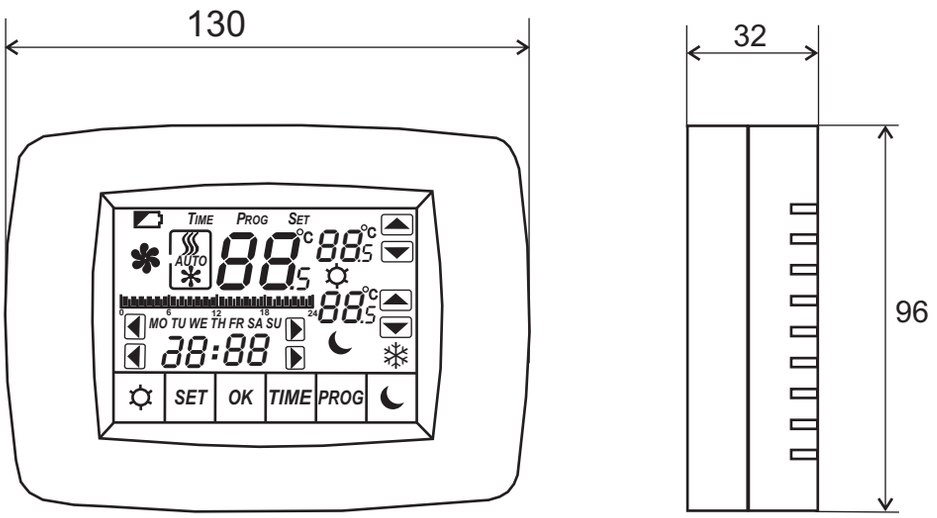
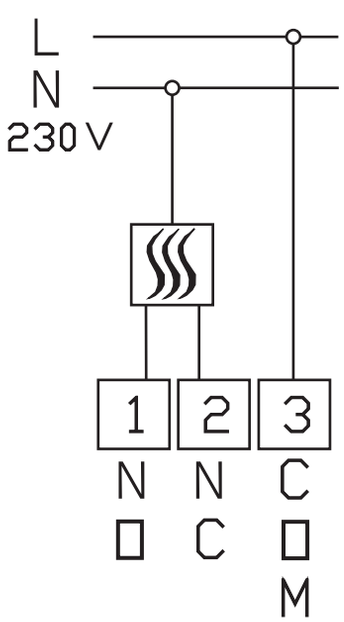
# TOUCH SCREEN ROOM THERMOSTAT TS930

## DIMENSIONS




## WIRING DIAGRAM




## TECHNICAL DATA

Power Rating:
230VAC 50Hz

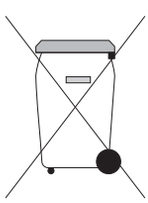
Switching Capacity:
4A Resistive

Temperature Range: 0°C - 35°C
Setting Temperature Range: 5°C - 30°C

Power:
2x AA Alkaline Batteries

Data Subject to Change Without Notice.

CE





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